Test 1



Choose the correct answer :

1. The wind movement has .... energy which moves the windmill's blades.
   (a) kinetic (b) solar (c) thermal (d) potential
2. The reason of flowing of river water downhill is the .... force.
   (a) pushing (b) friction (c) gravitational (d) electrical
3. The formation of canyons takes ....
   (a) few minutes. (b) few hours. (c) few days. (d) many years.
4. All the following are from causes of chemical weathering, except ....
   (a) acid rains. (b) clouds. (c) oxygen. (d) water.
5. Sand is formed due to breaking down of ....
   (a) glass. (b) wood. (c) rocks. (d) plastic.

Test 2

Total mark
15

Choose the correct answer :

1. Without sunlight, all the following items will be negatively affected, except ....
   (a) plants. (b) human. (c) rocks. (d) animals.
2. River water evaporates by the help of heat produced from ....
   (a) electric heaters. (b) the Sun. (c) electric iron. (d) kettles.
3. Lichens produce .... on rocks that dissolve minerals found in these rocks.
   (a) water (b) oxygen (c) rains (d) acids
4. Which of the following arrangements is correct about reshaping Earth's surface ?
   (a) Erosion ⟶ Weathering ⟶ Deposition.
   (b) Erosion ⟶ Deposition ⟶ Weathering.
   (c) Deposition ⟶ Erosion ⟶ Weathering.
   (d) Weathering ⟶ Erosion ⟶ Deposition.
5. In water turbines, the .... energy of water is changed into electrical energy.
   (a) chemical (b) kinetic (c) thermal (d) light

Test 3

Total mark
....
15

Choose the correct answer :

1 The solar energy is converted into .... energy in greenhouses.
ⓐ electrical ⓑ sound ⓒ thermal ⓓ potential

2 Greenhouses allow farmers to plant crops that only grow in ....
ⓐ polar climate. ⓑ warm climate.
ⓒ absence of sunlight. ⓓ absence of water.

3 Both modern wind turbines and modern water turbines are similar in their ....
ⓐ shape. ⓑ ability to generate potential energy.
ⓒ blades number. ⓓ ability to generate electrical energy.

4 All the following are renewable energy resources, except ....
ⓐ waterfalls. ⓑ coal. ⓒ the Sun. ⓓ wind.

5 The dropping of sediments in a new place, is known as ....
ⓐ deposition. ⓑ weathering. ⓒ freezing. ⓓ erosion.

Test 4

Total mark
....
15

Choose the correct answer :

1 Both waterfalls and .... are renewable energy resources.
ⓐ wind ⓑ coal ⓒ oil ⓓ fossil fuel

2 The change of energy in an .... is opposite to the change of energy in a wind turbine.
ⓐ electric bulb ⓑ electric heater ⓒ electric iron ⓓ electric fan

3 Using convergent .... sheets in cooking food is one of the benefits of using the solar energy.
ⓐ paper ⓑ plastic ⓒ mirror ⓓ wooden

4 Rocks can be broken down into small particles by exposuring to all of the following except ....
ⓐ rain water. ⓑ wind. ⓒ moon. ⓓ water waves.

5 When water freezes, it expands. This means that ....
ⓐ its volume increases. ⓑ its temperature increases.
ⓒ it will evaporates. ⓓ its volume decreases.

Test 5



Choose the correct answer :

1 In the water cycle, water .... , then it .... before falling in the form of rains.

ⓐ evaporates – condenses ⓑ freezes – evaporates
ⓒ evaporates – freezes ⓓ condenses – evaporates

2 Using of water to generate electricity depends on places ....

ⓐ with strong winds. ⓑ where dams are built on rivers.
ⓒ with weak winds. ⓓ where boats sail in rivers.

3 Limestone caves are formed due to the combination of ....

ⓐ dissolved minerals. ⓑ red-colored rusts.
ⓒ living organisms. ⓓ acid rains.

4 Gentle wind can carry .... for a short distance.

ⓐ sedimentary rocks ⓑ a big mass of mud
ⓒ a large body of water ⓓ sand grains

5 When a river that carries sediments meet a sea, ... is formed.

ⓐ a layer of sedimentary rock ⓑ a triangle-shaped delta
ⓒ a small sand dune ⓓ a large sand dune

Answers of Test 1

1 ⓐ 2 ⓒ 3 ⓓ 4 ⓑ 5 ⓒ

Answers of Test 2

1 ⓒ 2 ⓑ 3 ⓓ 4 ⓓ 5 ⓑ

Answers of Test 3

1 ⓒ 2 ⓑ 3 ⓓ 4 ⓑ 5 ⓐ

Answers of Test 4

1 ⓐ 2 ⓓ 3 ⓒ 4 ⓒ 5 ⓐ

Answers of Test 5

1 ⓐ 2 ⓑ 3 ⓐ 4 ⓓ 5 ⓑ

Self-Assessments

on Concept (3.3)

Self-Assessment 10 on Lesson 1

1 (A) Choose the correct answer :

1. The solar panels use solar energy to generate .... energy that is used to light up lamps of light posts in streets.

   a. thermal b. kinetic

   c. electrical d. light

2. All the following are considered as nonrenewable energy resources, except ....

   a. coal. b. wind.

   c. natural gas. d. petroleum.

3. Wind turbines generate electricity that can be used to operate all the following devices, except ....

   a. television. b. electric blender.

   c. hair dryer. d. hand bell.

(B) Give a reason for the following :

Modern water turbines are connected to generators.

....

....

2 (A) Put (✓) or (✗) :

1. Wind and water are considered as nonrenewable energy resources. ( )
2. Water is used to operate wind turbines to generate electricity. ( )
3. Hundreds of years ago, people used windmills to crush grain to make flour. ( )

(B) What happens if ... ?

The water supply that surrounds some modern water turbines dries up.

....

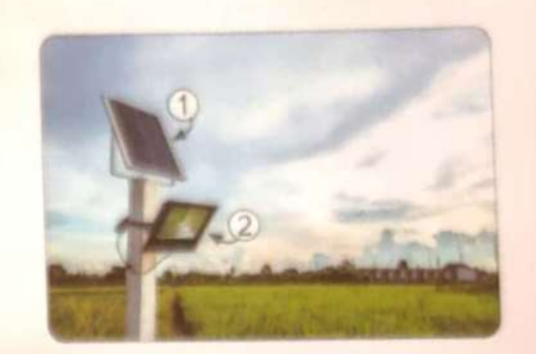
....

3 Look at the figure, then complete the following sentences :

1. Device number ① represents a solar panel which depends on the energy produced from the ....

2. The energy used to operate the device number ① is considered a .... energy resource.

3. Device number ② represents a lamp that produces .... energy and .... energy.



Self-Assessment 11 till Lesson 2

1 (A) Choose from column (B) what suits it in column (A) :

(A)	(B)
1. Wind turbines 2. Solar panels 3. Water turbines	a. generate electricity by using the kinetic energy of running water. b. generate electricity by using sound energy. c. generate electricity by using solar energy. d. generate electricity by using the kinetic energy of moving air.

1. ....   2. ....   3. ....

(B) Give a reason for the following :

Some electrical devices have solar panels.

....

2 (A) Correct the underlined words :

1. Wind is considered as a nonrenewable energy resource. (..................)
2. We can use straight mirrors to direct sunlight onto metal pots to heat them for cooking. (..................)
3. Wind turbines convert kinetic energy into light energy. (..................)

(B) What happens if ...?

Radiant energy that comes out of the Sun enters the greenhouses.

....

3 Look at the opposite picture, then complete the following sentences :

1. The name of this glass building is ....
2. The idea of working of this glass building depends on collecting the .... energy coming from the Sun.
3. The received energy is converted into .... energy that warms the inside of this building.
4. In the cold regions, this building allows farmers to plant crops that only grow in .... climates.

Self-Assessment 12 till Lesson 3

1 (A) Complete the following sentences :

1. Radiant energy is used to generate electricity directly by using .... , or indirectly as it causes blowing of .... that is used to rotate wind turbines.
2. A wind turbine spins faster when the kinetic energy of .... increases.
3. The energies that are produced from modern wind turbines and old windmills are considered as .... energy resources.

(B) Give a reason for :

Farmers use greenhouses to plant crops that grow in warm climates.

....

....

2 (A) Put (✓) or (✗) :

1. Solar panels are used to generate sound energy in some types of street lamps. (   )
2. When the kinetic energy of wind that is applied to the wind turbines increases, they produce more electricity. (   )
3. Both solar panels and natural gas are renewable energy resources. (   )

(B) What happens if ... ?

The kinetic energy of wind applied to the wind turbines decreases.

....

....

3 If the two wind turbines in front of you are affected by the different wind forces. Answer the following questions :

Weak wind



Wind turbine (A)

Strong wind



Wind turbine (B)

1. Which wind turbine spins faster ? (Give a reason for your answer).

....

....

2. Which wind turbine generates less electrical energy ?

....

Self-Assessment 13 till Lesson 4

1 **(A) Choose the correct answer :**

1. When the wind turbine rotates, the energy of moving air changes into .... energy.
   a. electrical
   b. light
   c. chemical
   d. potential
2. All the following can be done by the effect of solar energy, except ....
   a. warming houses.
   b. cooking food.
   c. producing sound from a hand bell.
   d. producing light in a light post.
3. Water turbines can generate more electricity by increasing the .... energy of water that is stored behind dams.
   a. light
   b. sound
   c. thermal
   d. potential

(B) Give a reason for the following :

Water turbines in dams are used to generate electricity.

....

....

2 (A) Write the scientific term of each of the following :

1. A building that is built across rivers to control the water flow and increase its potential energy. (..................)
2. A glass building that is used in cold areas to plant crops which grow in warm climate. (..................)
3. An energy that is produced from water turbines and is transmitted through wires to operate different devices in houses. (..................)

(B) Mention two devices that use solar energy to be operated, then mention the energy transformation in each one of them.

1. Device (1) : ....
   Changes of energy : ....
2. Device (2) : ....
   Changes of energy : ....

3 Look at this picture that shows the High Dam that was built at Aswan many years ago, then put (✓) or (X) in front of the following questions :

1. The stored water behind this dam has potential energy. ( )
2. The flow of water through this dam can be controlled. ( )
3. When water is released, it flows through wind turbines in the dam. ( )
4. When turbines rotate in the dam, electrical energy is generated. ( )

Self-Assessment 14 till Lesson 5

1 (A) Correct the underlined words :

1. The energy that is produced by <u>wind</u> turbines is called hydroelectric energy. (..................)
2. Wind turbines produce more electricity when the wind blows with more <u>potential</u> energy. (..................)
3. Greenhouses convert radiant energy coming from the Sun into <u>light</u> energy that is used to plant crops which grow in warm climates. (..................)

(B) What happens if ...?

The kinetic energy of wind applied to wind turbine increases.

....

....

2 (A) Cross out the odd word :

1. Water – Wind – Coal – Sun. (.....................)
2. Solar car – Hand mixer – Solar panel – Greenhouse. (.....................)
3. Gasoline – Coal – Natural gas – Wind. (.....................)

(B) Compare between water turbines and solar panels in the table below :

Points of comparison	Water turbines	Solar panels
1. Source of energy that is used to operate it :	....	....
2. The produced energy :	.... energy.	.... energy.

3 Look at the figure, then put (✓) or (X) :



1. Water in the area Ⓐ can be used in rotating water turbines. (   )
2. Water in the area Ⓐ has no kinetic energy. (   )
3. Water in the area Ⓑ may evaporate in the presence of sunlight. (   )
4. When water in both areas Ⓐ and Ⓑ evaporates, it never returns back to the river. (   )

Self-Assessments

on Concept (4.1)

Self-Assessment 15 on Lesson 1

1 **(A) Correct the underlined words :**

1. The deep valley that is carved by following water, is know as coastal rock. (..................)
2. The force of water and wind cause artificial erosion. (..................)
3. Canyons are formed due to fast changes. (..................)

(B) What happens when ... ?

Water flows for many years between mountains.

....

2 **(A) Put (✓) or (✗) :**

1. Both of sandcastles and canyons can be formed in few hours. ( )
2. There are some similarities between sandcastles and coastal rocks. ( )
3. Canyons have sloping at sides like that of coastal rocks. ( )

(B) Give a reason for the following :

Sandcastle on a seashore may disappear in few minutes.

....

3 **Complete the following sentences using the words below :**

(minutes – slow – years – fast)

1. Formation of coastal rocks and canyons takes many .... , so this is considered as .... changes.
2. Disappearance of sandcastle on a seashore takes few .... , so this is considered as .... changes.

Self-Assessment 16 till Lesson 2

1 **(A) Correct the underlined words :**

1. The movement of sediments from one place to another, is know as deposition. (..................)
2. Weather is the breaking down of rocks on Earth's surface into tiny pieces. (..................)
3. Plant leaves grow inside the cracks of rocks which become wider. (..................)

(B) What happens when ...?

Water in cracks of rocks freeze and melt several time.

....

....

2 (A) Put (✓) or (X) :

1. Water may cause mechanical and chemical weathering. ( )
2. Chemical weathering could occur due to the acid that is produced from lichens or present in some rains. ( )
3. Limestone caves are formed due to friction between sand and rocks. ( )

(B) Give a reason for the following :

Plant roots play an important role in mechanical weathering.

....

....

3 Classify the following examples in the table below :

1. Rusting of an iron statue.
2. Formation of limestone cave.
3. Break down of rocks by plant roots.
4. Break down of a rock statue by wind.
5. Break down of rocks by acid rain.
6. Dissolving minerals of rocks by acids of lichens.

Mechanical weathering	Chemical weathering
....	....
....	....
....	....
....	....
....	....
....	....

Self-Assessment 18 till Lesson 4

1 **(A) Correct the underlined words :**

1. Weathering process followed by deposition process in reshaping Earth's surface. (..................)
2. Sand grains can be carried for a short distance by strong wind. (..................)
3. When many layers of sediments pressing down each others over a long period of time, sand dunes are formed. (..................)

(B) Give a reason for the following :

Sedimentary rocks are formed over a long period of time.

....

....

2 **(A) Put (✓) or (✗) :**

1. You can see the reshaping of Earth's surface during its occurance. (   )
2. If there is no erosion process, there is no deposition process in another place. (   )
3. Sedimentary rocks are present in the bottom of oceans, lakes and in deserts. (   )

(B) What happens when ...?

The gravity acts on broken weathered rocks at the top of a mountain.

....

....

3 **Study the following two figures of sand grains, then put (✓) or (✗) below :**



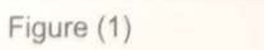


Figure (1)



Figure (2)

1. The action of water erosion appears in figure (1). (   )
2. Sedimentary rocks do not appear in both figures (1) and (2). (   )
3. Gentle wind causes the deposition of sand grains in figure (1). (   )
4. Both figures (1) and (2) show sand dunes that are formed as a result of wind deposition. (   )

Self-Assessment 19 till Lesson 5

1 (A) Correct the underlined words :

1. Small hills of sand found in a desert are known as sedimentary rocks. (..................)
2. Erosion process means that wind or water break down rocks. (..................)
3. Erosion process is usually followed by weathering process. (..................)

(B) Give a reason for the following :

If there is no erosion process there is no deposition process in another place.

....

....

2 (A) Put (✓) or (✗) :

1. After deposition of eroded materials it may wear down again by wind or water. (   )
2. Erosion and deposition are two linked processes. (   )
3. Both of small sand dunes and sedimentary rocks need few days to be formed. (   )

(B) What happens if ...?

Weathering process doesn't occur.

....

....

3 Study the following two figures, then put (✓) or (✗) below :



Figure (1)


Figure (2)

1. Figure (1) represents a triangle-shaped delta. (   )
2. Figures (2) occurs due to the deposition of sediments and mud in a desert. (   )
3. Formation of figure (1) takes longer time than formation of figure (2). (   )
4. Water erosion play an important role in formation of sand dunes that present in figure (2). (   )

Model Exam

on Concept (4.1)

Total mark

____
20

1 (A) Write the scientific term of each of the following : *(5 marks)*

1. The disappearance of a sandcastle as a result of its hitting with the sea waves. (..................)
2. It is a type of caves that is formed when dissolved minerals of rocks combine again in new shapes. (..................)
3. Process in which the moving sediments are dropped in a new place. (..................)
4. A hill of sand created by the wind. (..................)

(B) What happens if ...?

A red-colored rust is formed on some rocks.

....

....

2 (A) Choose the correct answer : *(5 marks)*

1. As a result of breaking down of .... , sand is formed.
   a. rubber b. plastic c. rocks d. glass
2. The breaking of rocks into smaller particles without changing their properties is called ....
   a. mechanical weathering. b. chemical weathering.
   c. deposition. d. erosion.
3. The deep narrow valley with slopes at its sides and often with water stream flowing through it is known as a ....
   a. canyon. b. mountain. c. hill. d. river.
4. Lichens produce .... on rocks that dissolve minerals found in these rocks.
   a. oxygen b. acids c. water d. rain

(B) Give a reason for the following :

Water play an important role in the formation of limestone caves.

....

....

3 (A) Put (✓) or (X) : *(5 marks)*

1. All changes that occur on the Earth's surface take hundreds of years. ( )
2. There are many types of sediments like sand, rocks and soil. ( )
3. Roots of plants can slowly grow over time through small cracks in rocks causing chemical weathering. ( )
4. Water can cause the two types of weathering. ( )

(B) Complete the following sentences by using the words between brackets :

(rocks – wind – water)

1. Air moving from an area to another and has a role in breaking down of rocks into smaller particles is known as ....
2. The shape of coastal rocks is affected by the forces of .... and wind.
3. The origin of sand is the breaking down of some types of ....

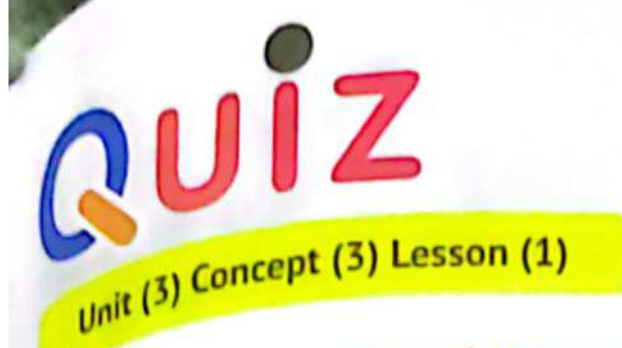
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4 (A) Complete the following sentences : *(5 marks)*

1. During .... process, rocks are broken down or weared away.
2. Formation of limestone caves is an example of .... weathering.
3. Sediments are mixed with the remains of .... and .... forming layers at the bottom of oceans and lakes.
4. There are two types of weathering which are .... and ....

(B) Correct the underlined words :

1. The dropping of sediments in a new place, is known as <u>freezing</u>. (......................)
2. Small sand dunes are formed due to <u>strong</u> winds. (......................)



Unit (3) Concept (3) Lesson (1)

1 Choose the correct answer:

1. .... is the energy that run out faster than us consuming it.
   - a. Renewable source of energy
   - b. Non-renewable source of energy
   - c. Permanent source of energy
   - d. Solar energy

2. All of these are examples of renewable sources of energy, except ....
   - a. solar energy
   - b. wind energy
   - c. coal
   - d. water falls

3. People use machines to ....
   - a. make their life easier
   - b. get tasks done faster
   - c. save their effort
   - d. all the following answers

4. The number of blades in a modern mill is .... the number of blades in an old windmill.
   - a. more than
   - b. less than
   - c. equal to
   - d. double

5. A modern windmill is .... than an old windmill.
   - a. taller
   - b. shorter
   - c. heavier
   - d. no correct answer

6. The input energy in the flashlight is ....
   - a. electric energy
   - b. chemical energy
   - c. kinetic energy
   - d. no correct answer

7. .... depends on a renewable source of energy.
   a. Petroleum oven b. Gas oven
   c. Solar cell d. Flashlight

8. The electric heater depends on a .... source of energy.
   a. renewable b. non-renewable
   c. permanent d. no correct answer.

9. Coal is the source of energy in a ....
   a. gas oven b. fireplace
   c. petroleum oven d. solar heater

10. .... were used to grind grains.
    a. Solar panels b. Windmills
    c. Fireplaces d. Gas ovens

11. In a windmill, it is better to ....
    a. increase the number of blades
    b. decrease the number of blades
    c. make its blades light
    d. b & c

12. The .... produces heat and depends on a non-renewable source of energy.
    a. electric heater b. solar heater
    c. gas oven d. no correct answer

2 Put (✓) or (✗):

1. Waterfalls are from the renewable sources of energy. (   )
2. Wind moves the windmill blades to generate kinetic energy. (   )
3. A modern windmill is shorter than an old windmill. (   )
4. Flashlight depends on a non-renewable source of energy. (   )

5. Coal is used to operate the gas oven. ( )
6. All devices depend on renewable sources of energy. ( )
7. The output energy in a solar heater is solar energy. ( )
8. Old windmills are used in grinding grains. ( )
9. Natural gas is considered from renewable sources of energy. ( )
10. The outcoming energy of a battery is chemical energy. ( )

3 Fill in the gaps using the following words:

(Coal – heat – chemical – consumes – produces – Wind – taller - shorter)

1. .... is from renewable sources of energy.
2. The input energy in a battery is .... energy.
3. The modern windmill is .... than the old windmills.
4. .... is used in the fireplace to produce heat energy.
5. A solar heater .... heat energy.

4 Write the scientific term:

1. It is the energy that will not run out faster than us consuming it. (....................)
2. They are used to make the life of people easier and get tasks done faster. (....................)
3. A device at which wind rotates its blades and it produces kinetic energy. (....................)
4. The source of energy of a flashlight. (....................)
5. The source of energy of a fireplace. (....................)
6. The outcoming energy of a solar heater. (....................)
7. The incoming energy in an electric heater. (....................)



5 Complete the following:

1. Machines need .... to be operated.
2. .... is the energy that will not run out faster than consuming it.
3. .... and .... are renewable sources of energy.
4. .... and .... are non-renewable sources of energy.
5. People use machines to .... and ....
6. Windmills were used to ....
7. An old windmill is .... than a modern windmill.
8. The number of blades in a modern wind mill is .... than the old one.
9. Any device needs .... to move
10. The input energy in a flashlight is .... energy.
11. The output energy in a flashlight is .... energy.
12. Petroleum oven depends on a .... source of energy.
13. The .... changes electric energy into heat energy.
14. Coal is used in the .... to produce heat.
15. Coal is used in the .... to generate electricity.
16. The input energy in a fireplace is ....
17. The.................... & .... produce heat and depend on non-renewable sources of energy.
18. The.................... & .... produce heat and depend on renewable sources of energy.

6 Study the figures, then answer the following questions:

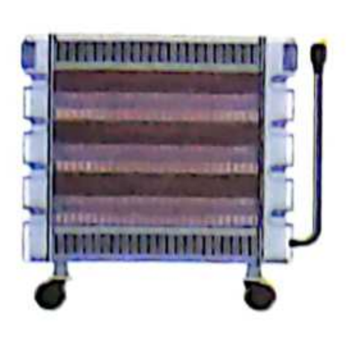


Figure (1)



Figure (2)

1. What is the output energies of the two figures?

....

....

2. Which one of them depend on a non-renewable source of energy?

....

....

7 Complete the following table:

Device	Source of Energy	Source of Energy Kind
Flashlight	....	....
Solar heater	....	....
Gas oven	....	....
Fireplace	....	....
Electric heater	....	....



8 What is the importance of:

1. Machines: ....
2. Windmills: ....
3. Solar panels: ....
4. Flashlight: ....
5. Fireplace: ....

9 What is meant by:

1. Renewable Source of Energy.

....

....

2. Non-renewable Source of Energy.

....

....

3. Solar Panels.

....

....

10 Give an example for:

1. Renewable source of energy:

....

2. Non-renewable source of energy:

....



3. A device that depends on a renewable source of energy:

....

4. A device that depends on a non-renewable source of energy:

....

11 What will happen when:

1. Wind moves the blades of a windmill.

....

....

2. Water moves the blades of a watermill.

....

....

12 Give reason for:

1. Solar energy is a renewable source of energy.

....

....

2. Petroleum is a non-renewable source of energy.

....

....

3. People use machines.

....

....



Unit (3) Concept (3) Lesson (2)

1 Choose the correct answer:

1. The surface of the .... is not solid.
   a. Sun b. Moon
   c. Earth d. Mars
2. The surface of the Sun ....
   a. is solid as the Moon
   b. is gas as the Moon
   c. isn't solid as the Moon
   d. isn't gas as the Moon
3. The Sun consists of different gases, such as ....
   a. hydrogen & nitrogen b. hydrogen & helium
   c. helium & oxygen d. oxygen & nitrogen
4. The surface of the Sun is called ....
   a. sun sphere b. gaseous sphere
   c. photosphere d. ionosphere
5. Sun is very important because ....
   a. it provides us with heat energy
   b. it provides us with light energy
   c. plants need it to grow up
   d. all the previous
6. If you look directly to the sun for a long time, your eyes w

   ....
   a. see rainbow b. be damaged
   c. be burned d. no correct answer

7. Without the sun ....
   a. plants will grow up but all animals will die
   b. plants will die but all animals will still be alive
   c. people can depend on the Moon instead of it
   d. life disappears on Earth

8. Heat and light energies transfer from space to us in the form of ....
   a. curved lines
   b. waves
   c. zigzag lines
   d. circles

9. Sunrays are called ....
   a. infrared rays
   b. X-rays
   c. visible rays
   d. radioactivity

10. .... help farmers to grow their plants that need hot weather in winter.
   a. Irrigation machines
   b. Greenhouses
   c. Tissue culture
   d. No correct answer

11. The heat energy of the Sun used to warm the .... part of a greenhouse.
   a. internal
   b. external
   c. a & b
   d. no correct answer

12. Curved mirrors are used for ....
   a. warming houses
   b. cooking
   c. getting electricity
   d. no correct answer

13. To warm our houses, we must place a ....
   a. large window on the wall facing the sun
   b. large window on the wall not facing the sun
   c. small window on the wall facing the sun
   d. small window on the wall not facing the sun

14. A solar heater is placed at the ....

a. streets	b. markets
c. bathrooms	d. tops of buildings

15. .... is (are) the output energy in solar panels.

a. Solar energy	b. Electric energy
c. Heat energy	d. b & c

16. A .... is from the devices that operate by using solar energy.

a. fan	b. calculator
c. TV	d. radio

2 Put (✓) or (✗):

1. The surface of the Sun is called photosphere. ( )
2. The surface of the Sun is solid as the Moon. ( )
3. Life disappears on Earth in the absence of the Sun. ( )
4. Sunrays are called radioactivity. ( )
5. Greenhouse help farmers to grow plants that need cold weather in summer. ( )
6. A solar heater is always placed at the top of buildings. ( )
7. A solar cell consists of a large number of small solar panels. ( )
8. The output energy in calculators is the solar energy. ( )

3 Write the scientific term:

1. It is a gas region at the edge of the sun that emits light and heat.
(..................)
2. It helps farmers in planting crops that need hot weather in winter.
(..................)

3. They are used to direct the sunrays towards the cooking pans. (..................)

4. They are placed at the top of buildings. (..................)

5. It consists of a large number of small solar cells. (..................)

6. The input energy of the calculator. (..................)

4 Complete the following:

1. Sun consists of different gases, such as .... and ....

2. The surface of the Sun is called ....

3. Sun provides us with .... and .... energies.

4. If you look directly to the sun for a long time, your eyes will be ....

5. Without the sun, the plants will ....

6. Sunrays are called ....

7. .... help farmers in planting crops that need hot weather in winter.

8. .... are used to direct sunrays towards the cooking pans.

9. The solar heater is placed at the ....

10. A solar panel consists of a large number of ....

11. Solar panels change .... energy into .... or .... energies.

12. The input energy in calculators is .... energy.

5 What is meant by:

1. Photosphere

....

....

2. Solar Energy

....

....

3. Solar Panels

....

....

4. Greenhouse

....

....

6 Study the figures, then answer the following questions:

Figure (1)	Figure (2)

1. **The following figure represents two plants:**

a. Which figure represents the plant in the absence of the sun?

....

b. What happens to the animals in the absence of the sun?

....

c. What is the importance of the sun?

....

2. **The following figure represents a solar oven:**

   a. What type of mirrors are used in this device?

   ....

   ....

   b. What is the importance of this device?

   ....

3. **The following figure represents a solar heater:**

   a. The input energy is ....

   b. The output energy is ....

   c. It is placed at the ....

4. **The following figure represents a calculator:**

   a. The input energy is ....

   b. It contains .... provided and small ....

7 What is the importance of:

1. The sun.

....

2. Solar energy.

....

3. Solar panels.

4. Curved mirrors.

5. Greenhouse.

8 What will happen when:

1. You look directly to the sun for a long time.

2. The sun disappears suddenly.

3. Hydrogen reacts with helium in the Sun.

9 Give reason for:

1. Sun is very important to us.

2. You feel the warmth of the sun at night.

3. Greenhouses are very important to farmers.



Unit (3) Concept (3) Lesson (3)

1 Choose the correct answer:

1. Solar energy causes ....
   a. air movements
   b. wind blowing
   c. a & b
   d. no correct answer

2. .... change the kinetic energy of turbines into electric energy.
   a. Motors
   b. Dynamos
   c. Windmills
   d. Watermills

3. The correct arrangement for generating electricity by using wind energy is ....
   a. Sun – wind – electric lines – windmills - houses
   b. Sun – wind – windmills – electric lines - houses
   c. Sun – windmills – electric lines – wind - houses
   d. Sun – windmills – wind – electric lines - houses

4. Which of the following statements is correct?
   a. A dynamo changes electric energy into kinetic energy.
   b. The wind rotates the blades of watermills.
   c. Solar energy causes wind blowing.
   d. Electricity is transferred to cities through thin wires.

5. For generating a huge amount of electricity, it's better t...
....

a. increase the number of blades of the turbine
b. decrease the number of blades of the turbine
c. design light blades
d. b & c

6. The most effective turbine in generating electricity is ....

a. 

b. 

c. 

d. 

2 Complete the following:

1. The sun .... the earth and the wind.
2. Solar energy causes air .... and wind ....
3. A dynamo changes .... energy to .... energy.
4. Electricity is transferred to cities through ....
5. It is better to .... the number of blades inside the turbine.

3 Write the scientific term:

1. It warms the earth and the wind. (..........................)
2. It causes air movement and wind blowing. (..........................)
3. It changes the kinetic energy into electric energy. (..........................)

4 Put (✓) or (✗):

1. The wind rotates the blades of windmills. (   )
2. The motor changes electric energy into heat energy. (   )
3. Electricity is transferred to cities through thin wires. (   )
4. It is better to decrease the number of blades of a turbine. (   )
5. Heavy blades are better than light blades in generating electricity. (   )

5 What is meant by:

- Dynamo

....

....

6 Study the figures, then answer the following questions:

1. **To generate electricity, arrange the following figures from the start to the end:**



....



....



....



....



....

6 Choose from the opposite figures the most effective turbine & the reason:

	Figure (1)	Figure (2)	Reason
a.			....
b.			....
c.			....

7 Complete the following table:

Device	Input Energy	Output energy
Motor	....	....
Dynamo	....	....

8 What will happen when:

1. The wind rotates the blades of the turbine.

....

....

2. We decrease the number of blades in the turbine.

....

....

3. We replace the light blades of turbines by heavy blades.

....

....

9 Give reason for:

1. Sun helps us in generating electricity by wind.

....

....

2. Modern windmills are better than old windmills.

....

....



Unit (3) Concept (3) Lesson (4)

1 Choose the correct answer:

1. Water of rivers stores great .... at the top of slopes.
   a. kinetic energy
   b. potential energy
   c. electric energy
   d. light energy
2. When the water of rivers falls from a high slope, ...
   a. potential energy is converted into kinetic energy
   b. kinetic energy is converted into potential energy
   c. potential energy is converted into electric energy
   d. kinetic energy is converted into electric energy
3. When the dams stop the flow of water, so the potential energy of water ....
   a. remains constant
   b. decreases
   c. increases
   d. changes to kinetic energy
4. Potential energy is converted gradually into kinetic energy when the ....
   a. dam stops the water
   b. dam allows water to pass
   c. water falls from a high slope
   d. b & c

2 Complete the following:

1. When the water of rivers falls from high slopes, potential energy is ....
2. The input energy of a dynamo is ....
3. When dams stop the flow of water, the potential energy ....
4. Electricity transfers to cities through .... and .... wires to light houses.

3 Put (✓) or (✗):

1. When dams stop water, the kinetic energy of water reaches its maximum value. (   )
2. When water becomes free, potential energy is changed to kinetic energy. (   )
3. A dynamo changes potential energy to kinetic energy. (   )

4 What will happen when:

1. Dams store the water of rivers.

....

....

2. The water of dams become free.

....

....





Model Exam 1

Unit (3) Concept (3)

1 Choose the correct answer:

1. A modern windmill is .... than an old windmill.
   a. taller b. shorter
   c. heavier d. no correct answer
2. Coal is the source of energy in the ....
   a. gas oven b. fireplace
   c. petroleum oven d. solar heater
3. The surface of the Sun ....
   a. is solid as the Moon b. is gas as the Moon
   c. isn't solid as the Moon d. isn't gas as the Moon
4. Which of the following statements is correct?
   a. A dynamo changes electric energy into kinetic energy.
   b. The wind rotates the blades of watermills.
   c. Solar energy causes wind blowing.
   d. Electricity is transferred to cities through thin wires.
5. Water of rivers stores great .... at the top of the slopes
   a. kinetic energy b. potential energy
   c. electric energy d. light energy

2 Write the scientific term:

1. It is the energy that will not run out faster than consuming
   (....................
2. The source of energy of a flashlight. (....................
3. It helps farmers in planting crops that need hot weather in wint
   (....................
4. The input energy of the calculator. (....................

3 Complete the following:

1. Machines need .... to be operated.
2. .... & .... produce heat and depend on non-renewable sources of energy.
3. Sun provides us with .... and .... energies.
4. Solar energy causes air .... and wind ....

4 Correct the underlined words:

1. Modern windmills are **shorter** than the old windmills. (....................)
2. **Coal** is used to operate the gas oven. (....................)
3. **Petroleum** is from the renewable sources of energy. (....................)
4. The **outcoming** energy of a battery is chemical energy. (....................)

5 What will happen when:

- The sun disappears suddenly.

....

....

6 What is meant by:

- Photosphere

....

....



Model Exam 2

Unit (3) Concept (3)

1 Choose the correct answer:

1. All of these are examples of renewable sources of energy, except ....

   a. solar energy b. wind energy

   c. coal d. water falls

2. In a windmill, it is better to ....

   a. increase the number of blades

   b. decrease the number of blades

   c. make its blades light

   d. b & c

3. The surface of the Sun is called ....

   a. sun sphere b. gaseous sphere

   c. photosphere d. ionosphere

4. Potential energy is converted gradually into kinetic energy when the ....

   a. dam stops the water b. dam allows water to pass

   c. water falls from a high slope

   d. b & c

5. The most effective turbine in generating electricity is ....

   b. 

   c. 

   d. 

2 Write the scientific term:

1. It is used to make the life of people easier and get tasks done faster. (..........)
2. The source of energy of a fireplace. (..........)
3. It is a gas region at the edge of the Sun that emits light and heat. (..........)
4. It consists of a large number of small solar cells. (..........)

3 Complete the following:

1. A solar heater is placed at the ....
2. Sun consists of different gases, such as .... and ....
3. A modern windmill is .... than an old windmill.
4. Coal is used in a .... to produce heat.

4 Correct the underlined words:

1. <u>All</u> devices depend on renewable sources of energy. (..........)
2. <u>Natural gas</u> is considered from renewable sources of energy. (..........)
3. <u>Motor</u> changes kinetic energy into electric energy. (..........)
4. When dams stop water, the <u>kinetic</u> energy of the water reaches its maximum value. (..........)

5 Give reason for:

- We feel the warmth of the sun at night.

....

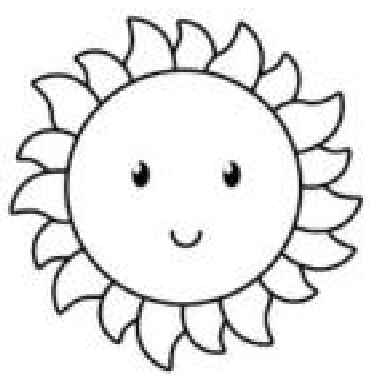
....

6 What is meant by:

- Renewable Source of Energy.

....

Concept 3-3 Renewable energy resources



- Solar energy comes from the sun, contains (light and heat)

- (solar energy) has radiant energy (radiation) found in the sun rays

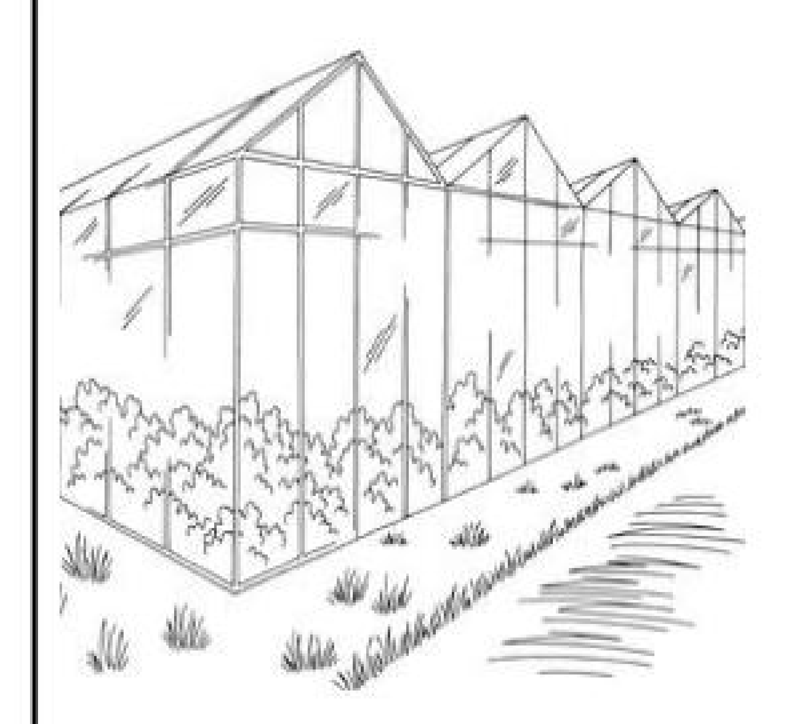
Uses of solar energy

1-We can get thermal energy from it, as it is a direct source of thermal energy

(When you expose yourself to the sun you can feel warm).

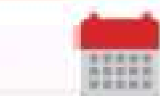
2-In greenhouses (allow the entry of solar energy especially radiant energy), then this radiant energy will be converted into thermal energy that warms the inside of the greenhouses

(this way will help farmers to plant the crops (plants) that only grow in warm climates) (even in winter).



Why you can feel warm at night?

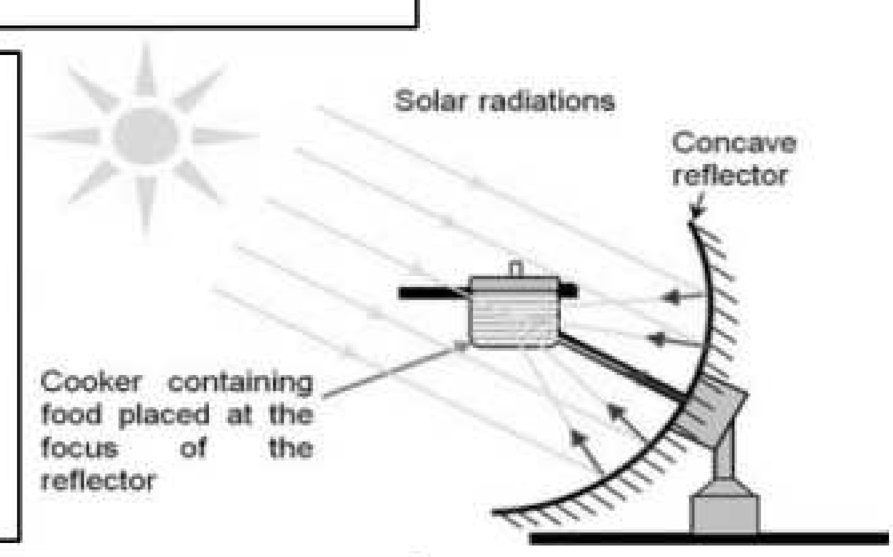
-The atmosphere, land and water of Earth absorb energy of the sun, then at night they will emit the energy again causes a raise in Earth's temperature (Greenhouse effect)





3-In warming houses (placing large windows on the walls that face the sun to warm the house).

4-In cooking food (concave curved mirrors are used to collect and focus sun rays to heat metal pots and cook the food inside).



5-In heating water (on the roof of the house there are panels made of (black pipes) used to heat water , when water passes through these pipes they will heat water then this water will be stored to be used later).



Solar panels

-They can be very small to supply only one light bulb, or very large to supply buildings or cities with energy.

How do solar panels work?

-it composed of many small solar cells, these cells capture solar energy (especially radiant energy) and convert (change) it directly into electrical or thermal energy

- Most of solar panels used to generate electricity.

Uses of electricity

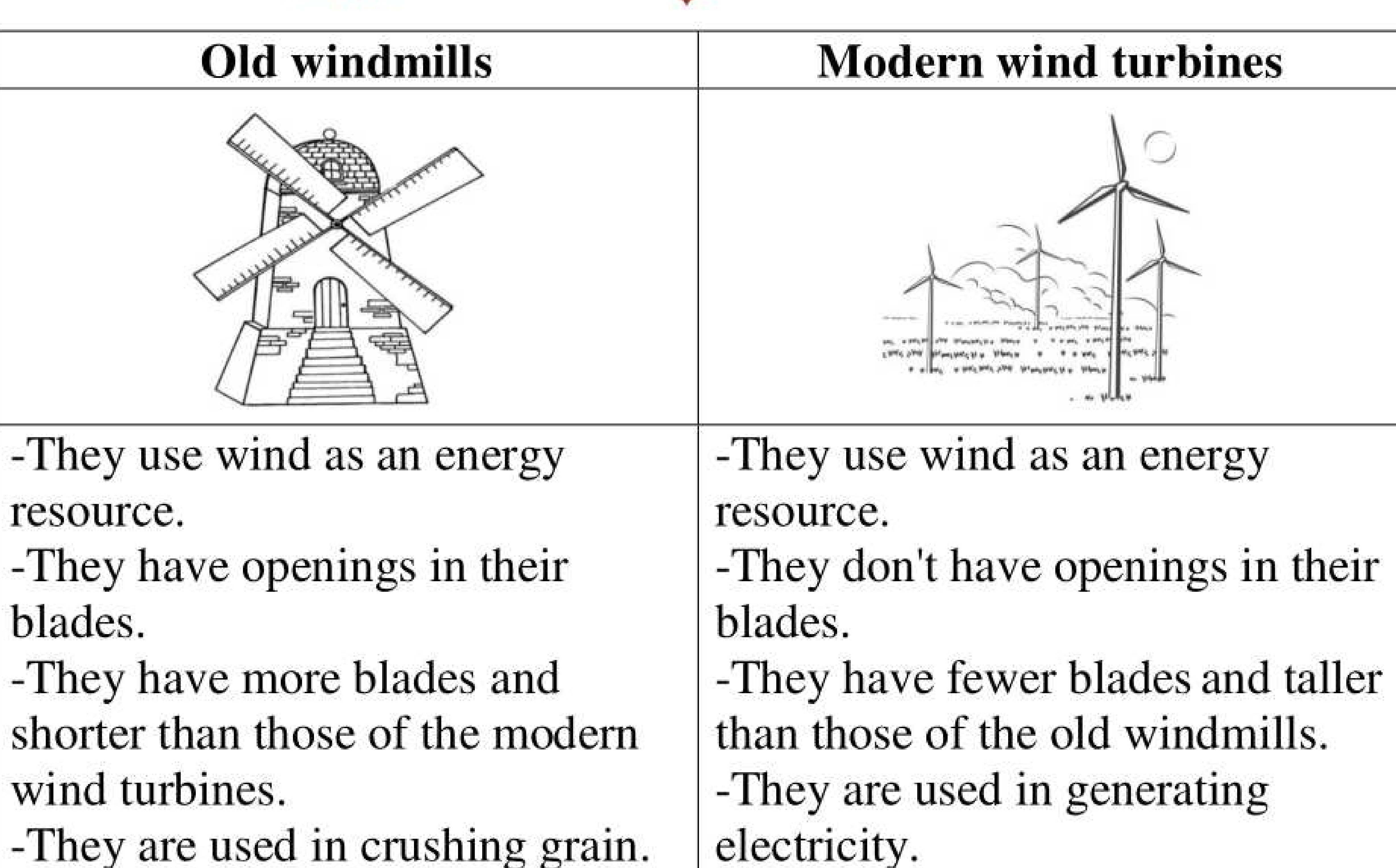
-Light the streets, recharge some types of batteries (calculators with small solar cells), in houses to operate electrical devices and to operate irrigation equipment (tools help the farmer to water the plants) in some villages.



Windmills and watermills

- Hundreds of years ago, people needed machines to make their lives easier, for example, they used windmills and watermills which helped them to grind grain to make flour.

P.O.C	Windmills	Watermills
Picture		
Energy used	The wind movement generates kinetic energy which moves the mills' blades, then kinetic energy transfer to other parts of the mills to crush the grain.	The water movement generates kinetic energy which moves the mills' blades, then kinetic energy transfer to other parts of the mills to crush the grain,
advantages	- Low cost. - Renewable energy resource	- Low cost. - Renewable energy resource
Disadvantages	Sometimes the wind does not blow, so the windmills do not move, so they are unable to do their job.	The water supply may dry up, so the watermills do not move, so they are unable to do their job.



Old windmills	Modern wind turbines
-They use wind as an energy resource. -They have openings in their blades. -They have more blades and shorter than those of the modern wind turbines. -They are used in crushing grain.	-They use wind as an energy resource. -They don't have openings in their blades. -They have fewer blades and taller than those of the old windmills. -They are used in generating electricity.

Old Watermills	Modern water turbines
-They use the movement of water as an energy resource -They are used in crushing grain	-They use the movement of water as an energy resource -They are used in generating electricity.

-<u>So how the wind be formed and what is the energy chain of the wind turbines.</u>

1-Different amounts of solar energy (especially radiant energy) reach different regions of the world.

2-Radiant energy causes the air around the Earth to heat up to different degrees, where the difference in temperatures between cold and hot air causes air to move and wind to blow.

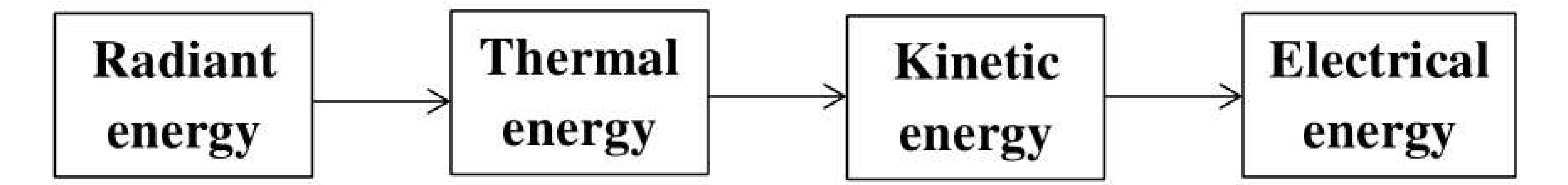


3-Kinetic energy of the wind movement is used to rotate

the blades of wind turbines. this causes the rotation of turbines and that leads to generating electrical energy.

4-This electrical energy is transmitted through big wires to

different places such as houses and factories.



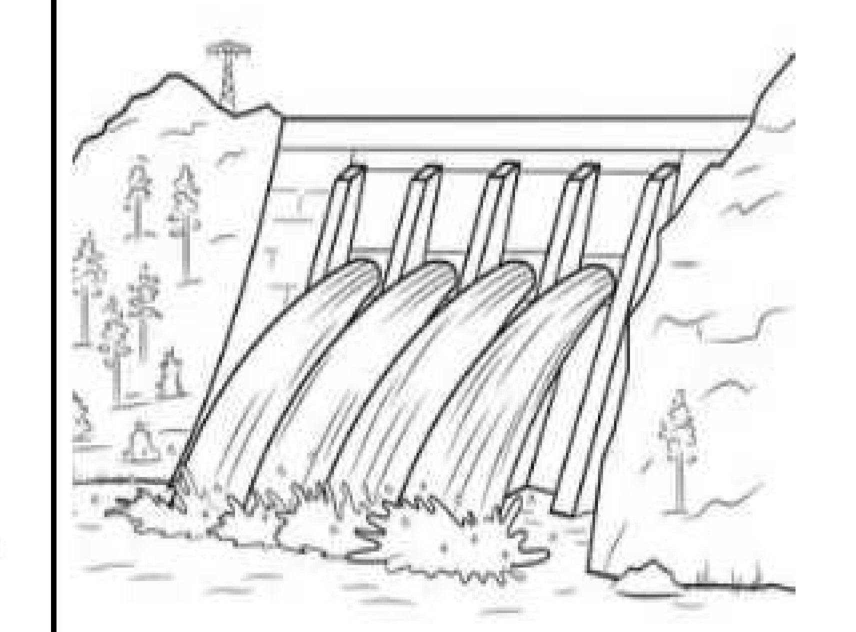
In wind turbines, when the kinetic energy of wind increases, the blades rotate faster, so the efficiency of wind turbines increases.

Falling water

-Rivers flow downhill, and during this process the gravitational potential energy of water is converted into kinetic energy that helps water turbines rotate to generate electricity.

-Dams are built on rivers to control the water flow and increase the potential energy of water.

- **<u>Hydroelectric dam</u>** is a type of dams which is used to generate electricity using the flow of water.



<u>Hydroelectric energy (hydroelectricity):</u>

It is a type of electrical energy generated by water turbines in



- How can electricity be generated from hydroelectric dams using water turbines ?

1- A hydroelectric dam prevents the flow of river water, so the potential energy of water increases.

2- When water is released, it flows through water turbines in the dam and the potential energy of water is converted into kinetic energy.

3- The flow of falling water that has kinetic energy helps water turbines rotate that operate generators to generate electricity.

4- This electricity is sent through long electric wires to the places where it is needed, and this type of electricity is called "hydroelectric energy" or hydroelectricity

P.O.C	The use of water to generate electricity	The use of wind to generate electricity
Differences	Water is used in places where dams are built on rivers.	Wind is used in places with strong winds.
Similarities	-Both of them are renewable energy resources. -Both of them use kinetic energy to operate turbines to generate electricity.	

Water cycle

The river's water does not return back to its source on its way through the dam but it flows into other bodies of water and evaporates, then condenses into clouds.

- When rain falls from these clouds, the water returns again to the river.



Evaluation

Choose the correct answer:

1- The solar energy is converted into ………. Energy in greenhouses.

a) electrical b) sound c) thermal d) potential

2- Using curved ………….. sheets in cooking food is one of the benefits of using the solar energy.

a) paper b) plastic c) wooden d) mirror

3- Kinetic energy created by …………. movement is used to rotate the blades of windmills.

a) moon b) stars c) wind d) water

4- The electrical energy is transmitted from wind turbines to houses through ……………...

a) water b) wind c) coal d) wires

5- Both waterfalls and …………. are renewable energy resources.

a) wind b) coal c) oil d) fossil fuel

6- The reason of flowing of river water downhill is the …………… force.

a) pushing b) gravitational c) friction d) electrical

7- Using of water to generate electricity depends on places …………..

a) with strong winds.

b) with weak winds.

c) where dams are built on rivers.

d) where boats sail in rivers.







8- In water turbines, the ……………. energy of water is changed into electrical energy.

a) chemical b) thermal c) kinetic d) light

Put (✓) or (x):

1-Waterfalls are considered as non-renewable energy resources. ( )

2- Dams are built on rivers to control the wind flow. ( )

3- Machines make our life more easier. ( )

4- Both wind movement and water flow has kinetic energy. ( )

5- The low cost of the energy used in watermills is from the disadvantages of using this energy. ( )

6- Wind turbines generate electricity by using the energy of water flow. ( )

7- Solar panels use sound energy to generate electricity. ( )

8- The high cost of producing energy in windmills is one of its advantages. ( )

9- Water turbines generate electricity by using the energy of water flow. ( )

Write the scientific term (who am i):

1-A type of electrical energy generated by water turbines in dams.

(…………………….….)

2- A turbine that converts the energy of falling water into electrical energy. (………..……………)

3- A mill that uses air to grind grains . (……………………...)

4-They are used in generating electricity by using the movement of wind. (……………………)



- The Earth's surface contain (Landscapes around us that contain many landforms)

Landforms such as : volcanoes, deserts, oceans, lakes, waterfalls and mountains.



- The Earth's surface is continuously changing by some factors

Factors that can change The Earth's surface

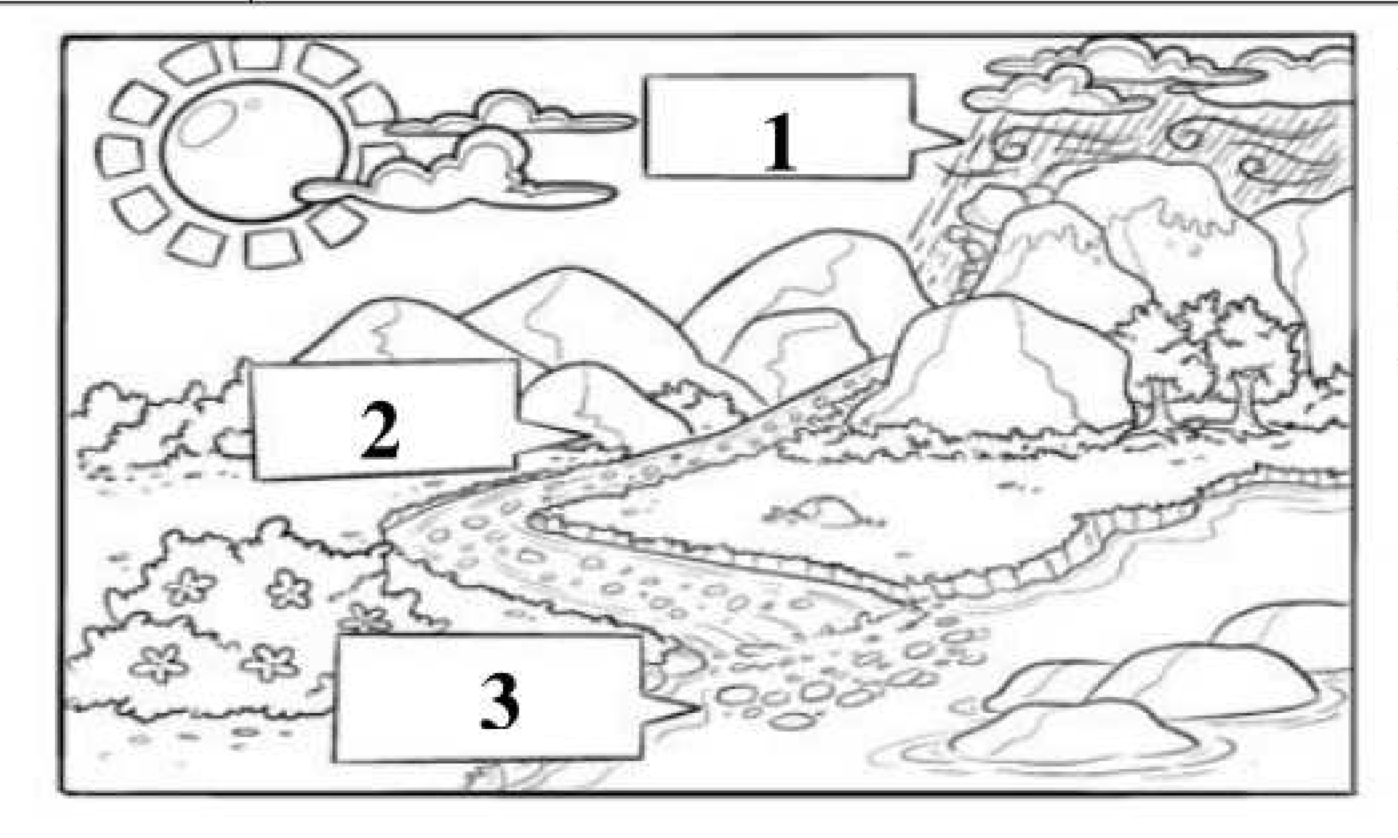
such as: Running water or waves, wind, heat (temperature), moving ice, chemical reactions, pressure, gravity, acid rain, plant roots.

-These factors can change landforms through a cycle of processes.

-This cycle starts with a process called **weathering** then **erosion** and ends with **deposition**.

Weathering → **Erosion** → **Deposition**
1 **2** **3**

1-Weathering	Breaking down of rocks into small pieces
2-Erosion	Moving weathered rocks from one place to another.
3-Deposition	Dropping of weathered rocks (sediments).









- This cycle of processes can produce new landforms

Examples

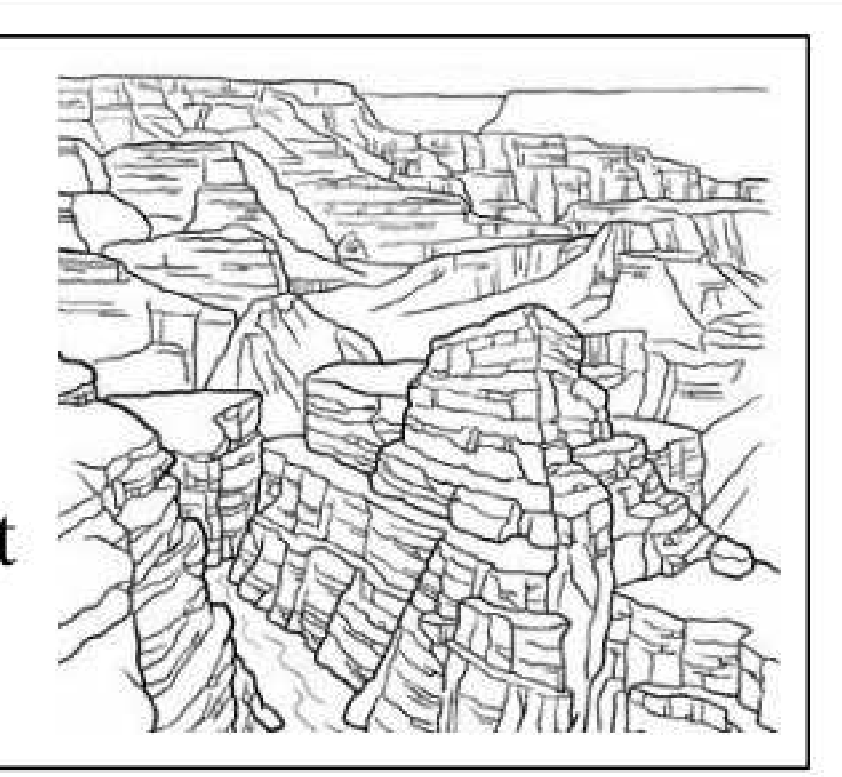
1-Sandcastle: the disappearance of a part of it or all of it after few hours, due to the transportation (erosion) of the sand particles from its place to another by the effect of water and wind (this is natural erosion for sandcastles and coasts.).

-Sand is formed by breaking down (weathering) of some types of rocks into smaller particles.

2- Formation of Canyons: They are deep valleys carved by flowing water (long time)

-Valley : is a lowland between mountains

- Canyons has needle-like parts and slopes at the sides, its formed by the effect of water.



3-Formtion of Delta and sand dunes.

- Some changes of Earth's surface can be very fast and other changes can be very slow (takes hundreds and millions of years)

Fast changes	Slow changes
They are observed in a sandcastle It may completely disappear in few minutes as a result of its hitting by the sea waves	They are observed in a coastal rocks over time There may be some little difference in its shape after many years if some parts break off.

<u>-Some similarities between the sandcastle and coastal rocks. (after change)</u>

1-Both have steep needle-like parts.

2-Both have sloping sides (inclined sides) at the bottom.

3-water and wind create their shapes.

Evaluation

<u>1-Choose the correct answer :</u>

1-Sand is formed due to breaking down of……….

a) glass. b) wood. c) rocks. d) its color.

2- The formation of canyons takes………

a) few minutes. b) few hours. c) many years.

3- The deep narrow valley with slopes at its sides and often with water stream flowing through it is known as a………..

a) river. b) canyon. c) mountain. d) hill

4- Rocks can be broken down into small particles by exposing it to all of the following, <u>except</u> ……………

a) rain water. b) wind. c) moon. d) water waves.

5- Disappearing a part of a sandcastle due to the effect of sea waves means that all the following have changed, except….

a) its size. b) its volume. c) its shape. d) color

2-Put (√) or (×):

1) Both of sandcastles and canyons can be formed in few hours.( )

2) There are some similarities between sandcastles and coastal rocks. ( )

3) Canyons have sloping at sides like that of coastal rocks. ( )

3-Write the scientific term:

1)The disappearance of a sandcastle as a result of its hitting with the sea waves. (…………………………….)

2) They are deep valleys carved by flowing water.(………………..)

3) It is a model that can be built on seashores using sand and may disappear easily by sea waves. (………………………)

4- Give reason for:

1-Sandcastle on a seashore may disappear in few minutes.

……………………………………………………………………..

5-What happens if:

1-Water flows for many years between mountains.

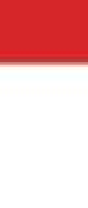
………………………………………………………………………

6-Match:

1-Weathering	Moving weathered rocks from one place to another. ( )
2-Erosion	Dropping of weathered rocks (sediments). ( )
3-Deposition	Breaking down of rocks into small pieces. ( )







Weathering

The difference between weathering and weather

weather	weathering
It's the condition of atmosphere at a specific time and place	It's the breaking down of rocks on earth's surface into smaller (tiny) pieces (slow)
Factors affecting on it : Temperature , wind , rains	Factors causing it: Wind and water
It help us to decide what to wear and when we go outside.	It can change the shape of earth's surface over time

- <u>The effect of weathering (you can see it in many observations)</u> (hard to see it during occurrence)

1-Breaking of statues.

2Rremoving of paints of buildings.

3-Pulling a wave to the sand of seashores.

Types of weathering

Mechanical weathering

It is the breaking down of rocks due to the effect of physical factors like wind, water, plant roots and temperature.

- The substance is broken into smaller parts without changing its nature.

Chemical weathering

It is the change (breaking down) of the structure of rocks due to chemical reactions with oxygen, water, acid rain and acid produced by some living organisms forming now substance .(greater change than Mechanical weathering





The role of physical factors in mechanical weathering

1- The role of wind in mechanical weathering

Steps

1-Wind pushes the sand from a place another.

2- Friction occurs between sand and rocks.

3- Rocks are broken down.



2-The role of water in mechanical weathering



Steps

1- Water runs over rocks.

2- Water dissolves some substance in rocks.

3- Rocks are broken down.

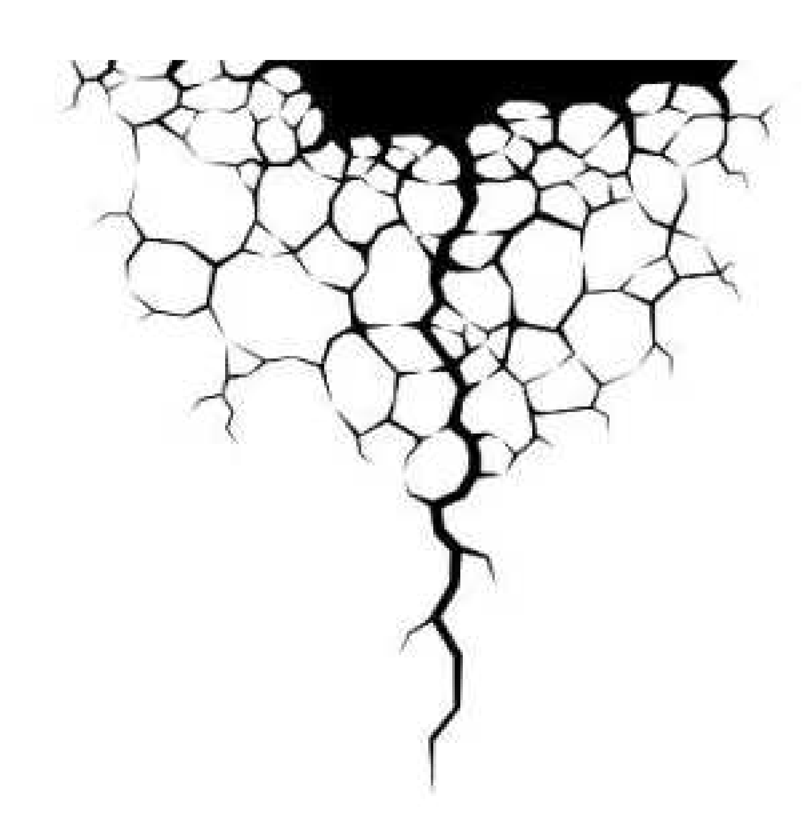
3-The role of plant roots in mechanical weathering

Steps

1- Plants roots grow inside the cracks of rocks.

2- Cracks become wider.

3- Rocks are broken down.







4-The role of temperature in mechanical weathering

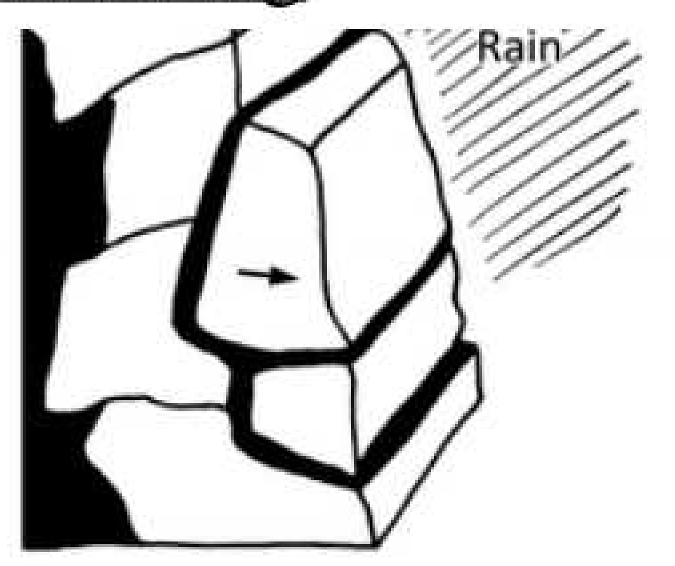
Steps

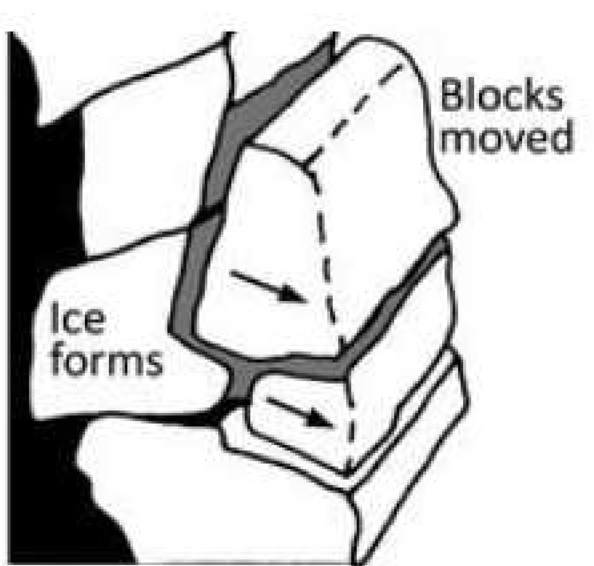
1- Water flows into the tiny cracks of rocks.

2- When the temperature gets very cold, water freezes forming ice that expands and makes the cracks of rocks become wider.

3- When the temperature increases, the ice melts, so water fills newly formed wide cracks again.

4- The cycle freezing of water and melting of ice continues until Rocks are broken down.



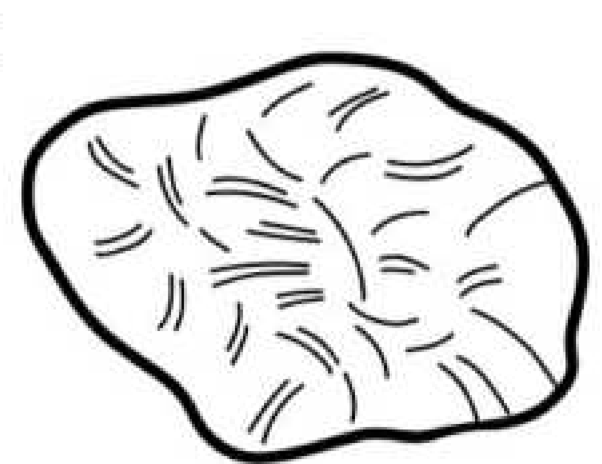




The role of factors in Chemical weathering

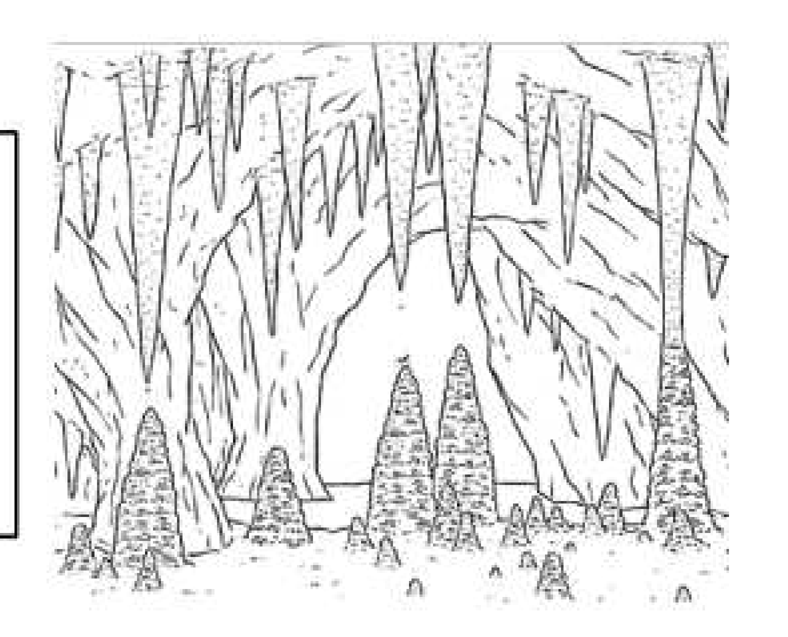
1-The role of oxygen in Chemical weathering

Its reacts with iron of some rocks forming red-colored rust , this reaction can weaken rocks and break them down easily.



2-The role of water in Chemical weathering

When water dissolves minerals in a rock, the dissolved minerals combine again forming new shapes as in limestone caves.





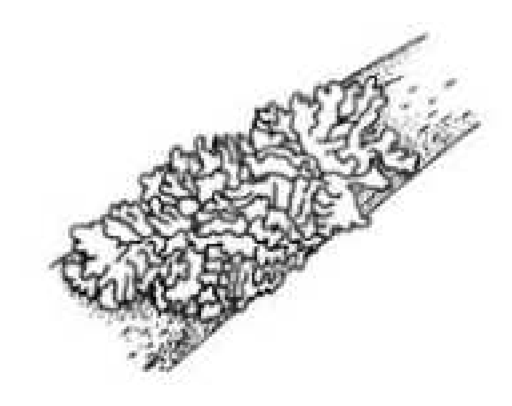
3-The role of acid rain in Chemical weathering



When the acid rain fall on rocks, it can dissolves minerals found in these rocks , causing the breakdown of rocks.

4-The role of acid produced by some living organisms (Lichens) in Chemical weathering.

Some tiny organisms called (Lichens) (tiny plants) produce acids on rocks that dissolve minerals found in these rocks and break them down.



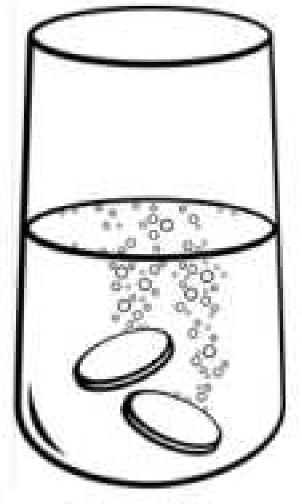
Scientists use models to recreate the weathering process to understand it better, because weathering takes along time in real life, and the rocks we can see now have been weathered over hundreds of years.

Example

1-Crushing a piece of biscuit by hands is similar to mechanical weathering of rocks.



2-Putting some other biscuits in a cup of water contains antacid (Antacid is a medicine used to treat the high acidity of stomach) is similar to



chemical weathering of rocks (biscuits dissolve and mix with water containing antacid causing a formation of different material).

Evaluation

1-Choose the correct answer :

1-**A student put some rocks in a container shook the container for three minutes ,they noticed that the rocks had been broken up into smaller pieces.**

-What process were they modeling?

a) Mechanical weathering   b) Chemical weathering   c) deposition

2- Which of the following can cause weathering?

a)Animals   b)Wind   c)Water   d)Plants   e)All of the previous

3-The forces of plants growing in and around rocks can cause rocks to break up into smaller pieces.

What is this type of process called?

a) Mechanical weathering   b) Erosion   c)Chemical weathering

4- Putting some other biscuits in a cup of water

contains antacid is similar to ………………of rocks.

a) Mechanical weathering   b) Erosion   c)Chemical weathering

5- Which of the following does not cause mechanical weathering?

a. Roots of plants.   b. Acid rains.   c. Wind movement.



2-Put (√) or (×):

1-Limestone caves are formed by the action of mechanical weathering. ( )

2-Friction force between rocks and sand carried by wind may cause weathering. ( )

3-When iron in rocks rusts, the rock becomes more stronger. ( )

4-There are many types of sediments like sand, rocks and soil. ( )

3-Write the scientific term:

1-The condition of atmosphere at a specific time and place.

(…………………….)

2- It is a type of weathering through which acids of lichens dissolve minerals of rocks. (…………………….)

3- It is a type of caves that is formed when dissolved minerals of rocks combine again in new shapes. (…………………….)

4-What happens if:

1- Water in cracks of rocks freeze and melts several times.

…………………………………………………………….

5- Classify the following factors (wind- water – acids- temperature - plant roots –oxygen gas).

factors of mechanical weathering	factors of chemical weathering
……………………………... ……………………………... ………………………………	……………………………... ……………………………... ………………………………

Erosion

It is the process in which the small particles (sediments) of sand, soil and rocks are moved to other places by wind, water and gravity.

- Sediments settle on the surface of land or the bottom of water bodies such as lakes and seas after being eroded.

1-Action of wind erosion

A gentle wind may carry sand grains for a short distance (about 1 meter), while stronger wide and hurricanes them for a longer distance.

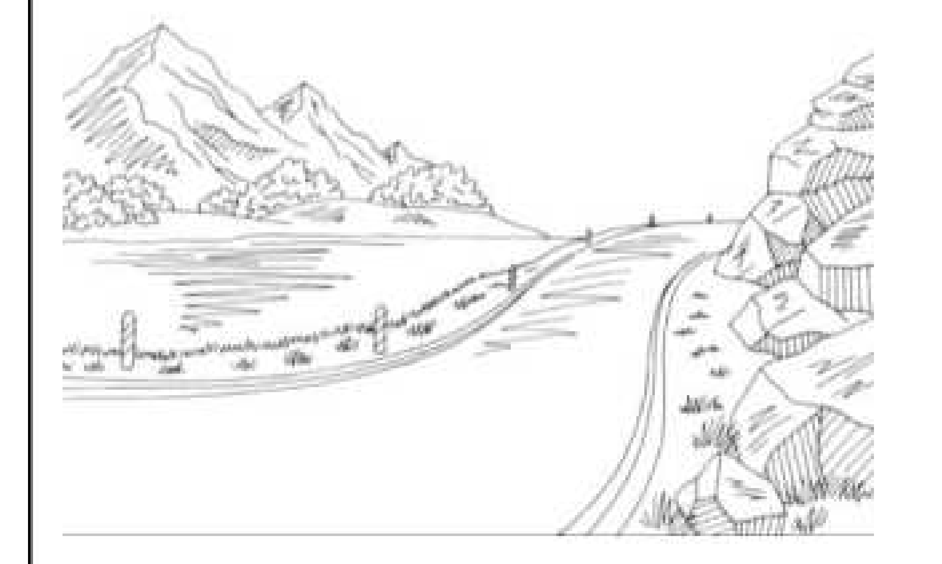


2-Action of water erosion

a) Rivers and floods carry sand, soil and rocks downstream.

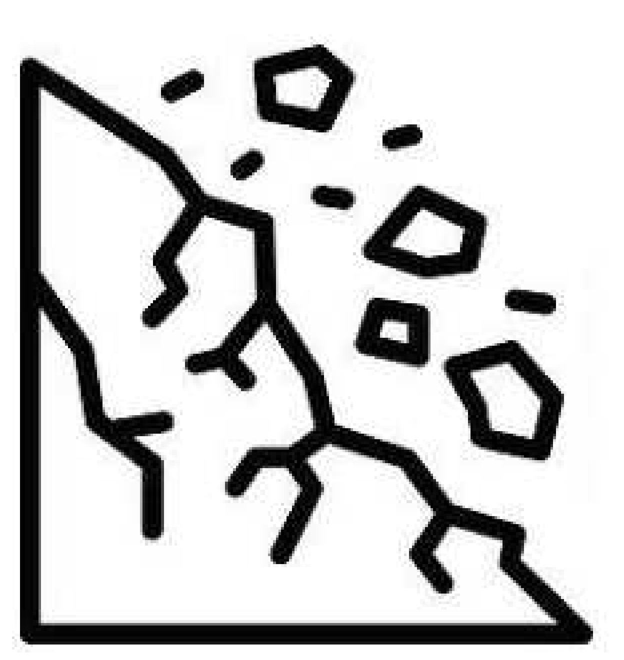
b) Sea waves pull sand away from beaches.

c) Rain washes away the soil of farms that locate beside downhill.



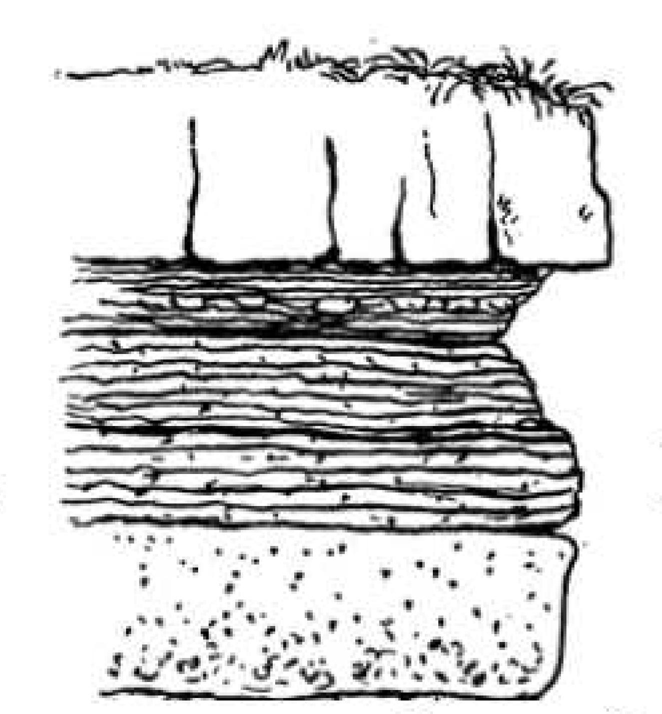
3-Action of gravity erosion

The broken weathered rocks in a mountain can be pulled down at mountainsides by the effect of gravity.



During a storm or a rockslide, erosion can happen quickly but in general, erosion happens slowly.

Formation of sedimentary rocks



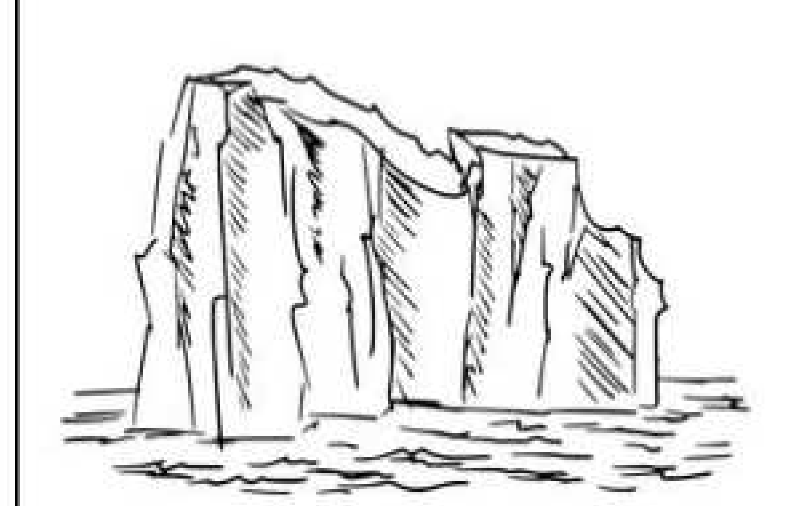
1-Sediments are mixed with mud, remains of plants and animals at the bottom of ocean, lakes and in deserts forming layers.

2-Over long period of time, more and more layers press down forming sedimentary rocks.

You can see the evidence left by erosion after hundreds, thousands or millions of years from its occurrence.

-Glaciers are rivers of ice or snow that move slowly over the Earth's surface.

-Glaciers can help in erosion as they pick up and carry large rocks and soil.



Deposition

It is the process of laying down of sediments after its erosion.

-It happens when the wind stop blowing and water stop moving or slows down.

1-Action of water in deposition (Delta).

-When a river carries sediments meet a sea, these sediments are deposited there(a sandbar along its banks (sides)) forming a delta such as the Nile Delta.

- Sea waves also move sand from one place to another new place where it

Deposits there.









Delta

It is a fan-shaped (triangle-shaped) mass of mud and other sediments that forms where a river enters a large body of water such as sea and ocean.

2-Action of wind in deposition (Sand dunes) (sand hills)

Weak winds	Strong winds
They can form small sand dunes Example : Sand dunes on a beach.	They can form large sand dunes Example : -sand dunes in: Western desert in Egypt Rub 'AL Khali in the Arabian peninsula.

Erosion and deposition are linked processes, erosion does not occur in one place without deposition in another, and vice versa.







Evaluation

1-Choose the correct answer :

1-Ice can erode land in the form of glaciers.

The force of gravity pulls …………….on a glacier as it moves slowly over land, and …………can pick up rock particles and carry them away as it moves.

a)downward, wind b)upward, the glacier c)downward, the glacier

2- When water runs downhill, rock can be loosened and eroded. The steeper the hill, the ……..the water moves. The stream of water eventually flows into a larger body of water, such as an ocean, and the rocks are ………there.

a)faster, eroded b)faster, deposited c)more slowly, deposited

3-How can deposition occur?

a) By running water b) By wind c)All of the previous

4-Wind can move sand and rock from place to place. This is called…………A stronger wind can pick up ………..particles.

a) erosion, larger b)deposition, only small c)deposition, larger

2-Put (√) or (×):

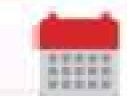
1- Erosion then weathering then deposition this is the right arrangement for breaking down of a rock. ( )

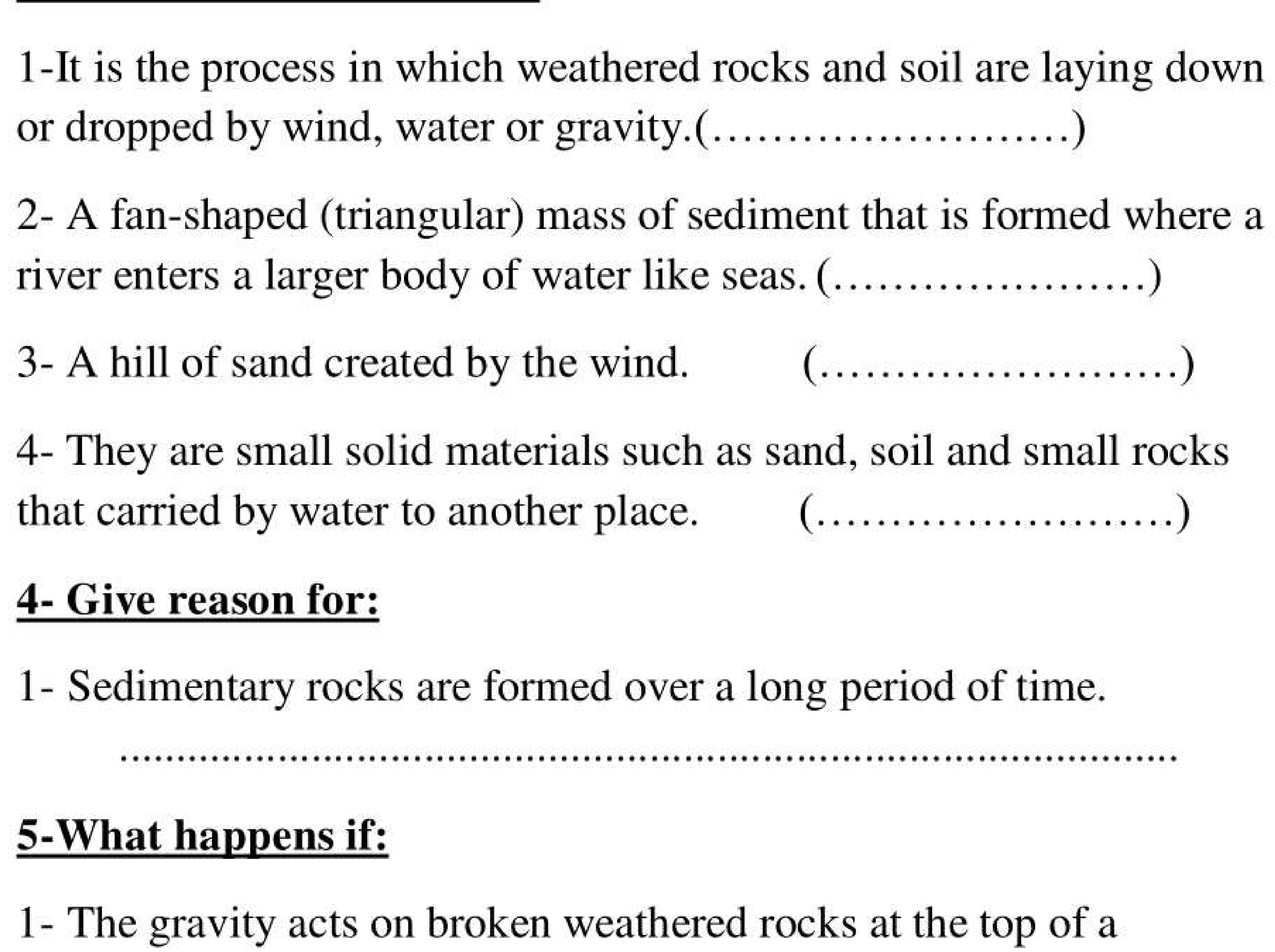
2- Erosion and deposition are two linked processes. ( )

3- Both of small sand dunes and sedimentary rocks need few days to be formed. ( )









3-Write the scientific term:

1-It is the process in which weathered rocks and soil are laying down or dropped by wind, water or gravity.(……………………)

2- A fan-shaped (triangular) mass of sediment that is formed where a river enters a larger body of water like seas. (…………………)

3- A hill of sand created by the wind. (……………………)

4- They are small solid materials such as sand, soil and small rocks that carried by water to another place. (……………………)

4- Give reason for:

1- Sedimentary rocks are formed over a long period of time.

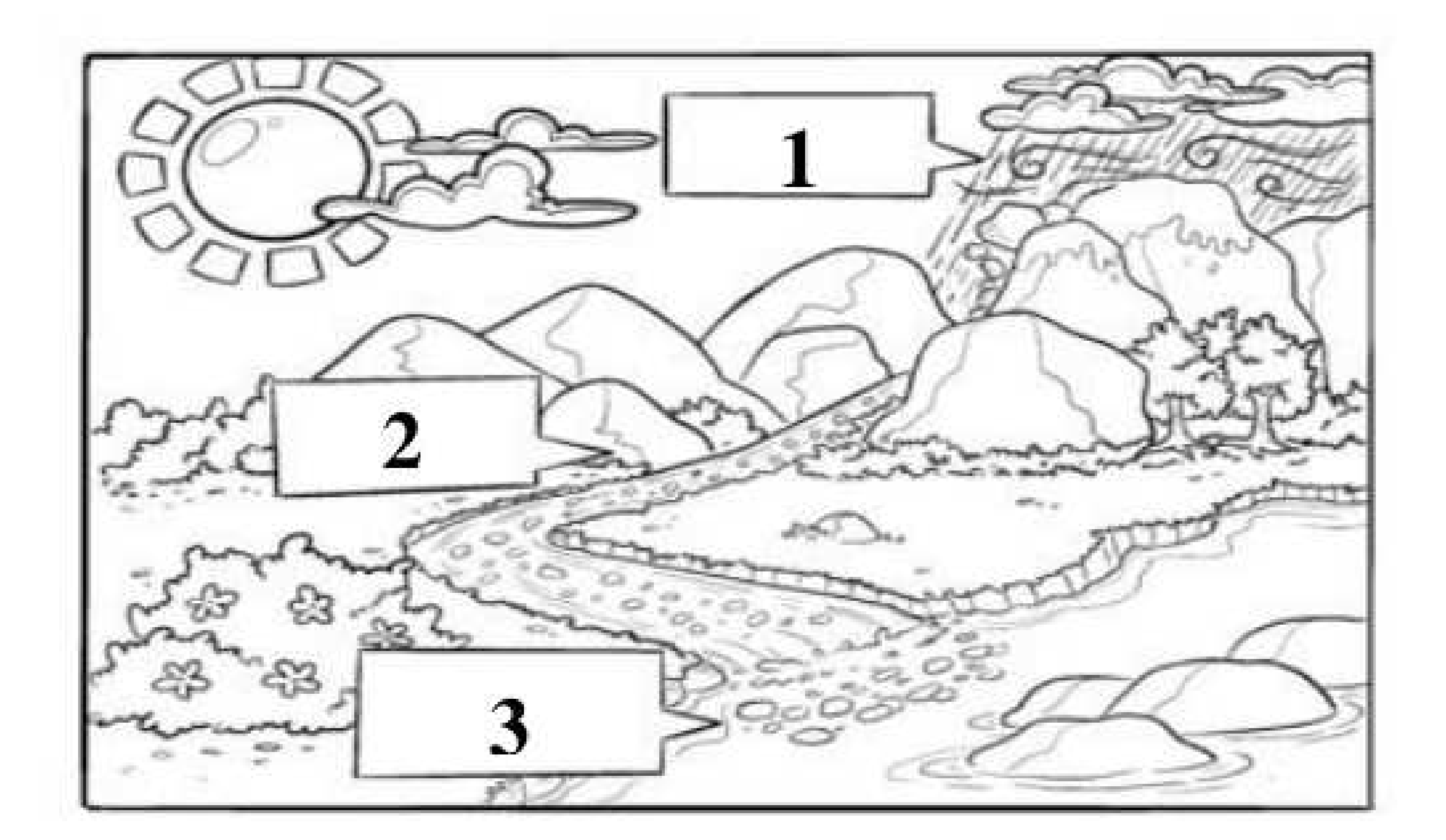
....

5-What happens if:

1- The gravity acts on broken weathered rocks at the top of a mountain.

…………………………………………………………….....

6-Complete: This is the cycle of processes that change the surface of Earth.



1- …………….process.

2- …………….process.

3- …………….process.

